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ABSTRACT

This is an evaluation of a Title VII Bilingual/Bicultural Program that was conducted at a New York City high school in 1979-1980. The program served Spanish and Chinese speaking students. A demographic analysis of the school's neighborhood and a discussion of participating students' characteristics are provided. A program description outlines the project's philosophy, organization, and structure. Instructional components of the program that are reviewed include: (1) placement, programming, and mainstreaming; (2) funding sources for the instructional component; (3) bilingual classes; and (4) information on program students in English as a Second Language and mainstream classes. Non-instructional components covered include: (1) funding sources; (2) curriculum and materials development; (3) materials in use; (4) supportive services; (5) staff characteristics; (6) staff development; (7) parental and community involvement; and (8) affective domain. Tables show students' results on the Criterion Referenced English Syntax Test and other tests measuring oral language ability, native language reading achievement, mathematics performance, science performance, and social studies performance. Attendance figures for students are also included. Conclusions and recommendations are presented. (APM)

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ED201691

FINAL EVALUATION REPORT

ESEA Title VII

Grant Number: G007503681

Project Number: 5001-42-07629

NEWTOWN HIGH SCHOOL

BILINGUAL BICULTURAL PROJECT

1979-1980

Principal: Mr. Joseph Weintraub

Director: Ms. Rachael Hanson

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NEW YORK CITY PUBLIC SCHOOLS
OFFICE OF EDUCATIONAL EVALUATION
RICHARD GUTTENBERG, ADMINISTRATOR

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THE BILINGUAL BICULTURAL PROJECT AT NEWTOWN HIGH SCHOOL

Location: 48-01 90th Street, Elmhurst, Queens
Year of Operation: 1979-1980, Fifth and Final Year of Funding
Target Languages: Spanish, Chinese
Number of Students: 380
Principal: Mr. Joseph Weintraub
Project Director: Ms. Rachael Hanson

I. Demographic Context

A. The Site: The Bilingual/Bicultural Project at Newtown High School consists of a two-year program covering the 9th and 10th grades. The site is located in the school building, situated at 48-01 90th Street, in Elmhurst, Queens. This site was selected through a decision of the local high school.

The area surrounding the school is mostly residential, consisting of 2 and 3 family houses. A quaint business area is located a few blocks from the school. This commercial area consists of small family businesses located on the first floors of 2 and 3 family buildings.

B. The Community: The majority of the school's population comes from the Elmhurst section of Queens. Others come from the Jackson Heights and Corona areas. The immediate attendance area, that surrounding the school, is a low-middle income community. In 1978-1979, the ethnic composition of Newtown High School averaged 16% Asian (which could be subdivided into 8% Chinese, 4% Korean, and 4% other Asian), 45% Hispanic, 12% Black and 26% other. A breakdown of the Limited English Proficiency population (LEP) of the school enrolled in English as a Second Language (ESL) classes is given as Addendum 1 at the end of this report. The Hispanic population

of ESL students includes a small percentage of Puerto Ricans (as the Puerto Ricans are mostly mainstreamed): the rest are mainly Colombians, Dominicans, and Ecuadorians, plus a few from other Latin American groups.

The Hispanic families in the immediate area reside in self-enclosed enclaves where English is not spoken. They can fulfill most of their needs using Spanish as the language of communication. This condition inhibits the growth of English linguisitic skills since there is no motivation to learn English. Furthermore, the stores, especially the grocery stores, centers of socialization in this cultural context, cater only to Hispanics and further discourage socialization in English. The Asian population, mostly Chinese/Korean, resides in areas where commerce with English speakers is more prevalent. Their stores cater to a more linguistically diversified population presenting opportunities for socialization in English. This type of environment tends to motivate the learning of English as a channel of communication.

The population of the attendance area is stable. Non-Hispanics, for the most part, own their homes which helps the family to develop roots in the community. Hispanics generally rent, but as the neighborhood is considered "good" and transportation is available, they tend to remain in the community. Nevertheless, Hispanics move more often than others in the community.

C. Problems: The community is characterized by problems found in many urban areas, including the following:

1) Employment: There is a lack of employment opportunities in the area. This condition is more acute in the part-time sector which

directly affects high school students. Employers with available part-time positions prefer not to hire LEP students, further limiting the employment opportunities of the target population.

2) Population Trends: There is an influx to the area of families with large numbers of persons. These families are either of the extended-family type or of the nuclear-family type. In order to satisfy the demand for apartments, landlords divide large apartments into smaller units. Families are therefore forced to accommodate large numbers of people in small apartment units. Furthermore, family units with a large number of children increase the younger population of the area. The community offers few outlets for leisure activities especially during the evening hours. Although this situation does not affect school attendance, it may account for an increase in the crime rate of the area.

3) Achievement: The area has a large percentage of immigrant or migrant youngsters with poor or non-existent academic and linguistic skills.

4) Health: While students generally do not suffer major health problems, many of their parents do. Many require constant visits to the doctor's office and/or to clinics and hospitals in the area. When the family has a number of small siblings, students have to remain in the home taking care of them while parents visit the doctor. This is reflected in school-wide attendance and in student performance. Fortunately, this does not occur on a large scale with bilingual program students.

II. Student Characteristics

A. Entry Criteria: Student entry into the program is based on the following:

1) A score of less than the 21 percentile in the Language Assessment Battery (LAB).

2) Teacher recommendation, which may be taken into account even when the student has scored at the 21 percentile or closely above.

3) The project director's evaluation of an oral interview and/or a written test.

Since the community consists mostly of an immigrant/migrant population, students enter the school at different times during the year. When recent arrivals come after the LAB tests have been administered, the second and third criteria are the sole indicators used to determine their admittance into the program.

B. The Target Population: The 380 students served by the project may be subdivided as follows:

1) Hispanic population - 350 students

9th graders - 201 students

10th graders - 149 students

2) Chinese population - 30 students

9th graders - 13 students

10th graders - 17 students

This population is heterogeneous in its language proficiency both in the native language and in the target language. The literacy

in the native language ranges from almost illiterate to highly literate. The approximate percentages are 23% almost completely illiterate, 17% functional, and 60% literate (in different degrees) in their native language. English literacy ranges from completely non-English-proficient to "B-2" on the Oral Language Ability Rating Scale. The program also includes those students who can neither read, write, or do basic mathematical computations in their own language, as well as those who are in or above their assigned level in one or more of these skills.

Financially, the population ranges from very low to low-middle income. From the standpoint of the family composition, students live in one-parent situations, substitute-parent situations, nuclear-family situations where both parents are present, and extended-family situations with both parents present. Combinations of these may also occur. These conditions are the result of migrant and immigrant patterns. The majority of bilingual program students live in a nuclear-family situation with both parents present.

III. Philosophy and the School Context

The philosophy of the bilingual project is transitional in outlook. The first goal is to make the student able to function in an English-speaking setting; therefore, the school tries to mainstream the students as soon as possible. For the student who enters the program in the 9th grade, there is a limitation of two years enrollment. No student can be enrolled in the project beyond this time except for failure in the 10th grade accompanied by English language difficulties.

A second goal of the project is to offer students the opportunity to acquire linguistic skills in Spanish. The project acknowledges the future employment, educational, and service opportunities that are open to fully bilingual and biliterate individuals.

These goals and limitations are widely supported by the rest of the school. When the project started, most of the school was negatively inclined toward it. The project was seen as the curtailment of employment opportunities for monolingual faculty. This situation has improved over the years, and the project has been seen more positively as the years have passed. There remains, however some ambivalent feeling which is reflected in the belief that special help to LEP students should be minimal and emphasis should be placed on ESL teaching.

IV. Organization and Structure

The project is under the direct supervision of the director, who is responsible for 16 teachers and 3 paraprofessionals. The director is supervised by the assistant principal in foreign languages and the principal of the school. The director is responsible to the principal in the area of management and to the assistant principal in the area of instruction.

The project encompasses the subject areas of language instruction (ESL and Spanish), math, science, and social studies (World Studies for the 9th grade and World History for the 10th grade). Except for ESL, these areas are taught in a bilingual mode. The areas of physical education, music, art, shop, and typing are taught outside the project under their respective departments to a limited number of program students, with the mainstream population, using English as the vehicle

of instruction.

The special nature of the project in the above-mentioned areas does not however detract from the on-going relationship which exists between it and the parent organization where it is housed. The project faculty and staff have a good relationship with all the departments of the school, both socially and professionally. This appears to be especially true of the project director. The paraprofessionals interact with the rest of the school in guidance problems of bilingual students attending mainstream classes. They are also available to the rest of the school for translations, either for school publications or for school correspondence, and for contacts with parents who do not speak English. The project students mix with the mainstream population in school events and in the mainstream classes they attend. The site of the project is another factor that promotes interaction between the program students and the rest of the school. The project office is located in the school building, and project classrooms are adjacent to mainstream classrooms. This physical integration furthers interaction between the two populations. Nevertheless, the language barrier often appears to present an impediment to fuller interaction between the two student populations.

V. Instructional Component

A. Placement, Programming and Mainstreaming:

As has been stated previously, several factors are taken into consideration for the placement of the student in the project. These are the LAB scores (below the 21 percentile), teachers' recommendations,

and the project director's recommendation. Of these, the LAB score is the deciding factor, though it may be overruled by any one of the other two in special cases. Student performance may also serve as a criterion. Once placement in the project has been made, several factors are taken into consideration for the development of the student's program. These include: an assessment of the student's previous records, the result of the math written test, and the LAB results. The student is then assigned to a uniform program which meets the graduation requirements of the school. Within this uniform program, math and English courses are individualized to meet the specific needs of the student.

A student is mainstreamed either by parental request, or by completing the ESL sequence and the available bilingual courses required for graduation. There is presently in the project a small number of students who have completed the ESL sequence but will not finish the bilingual courses until the end of the current year. They will be mainstreamed after they have completed the bilingual courses. Parents are motivated to discuss with the students and the project staff the placement, retention in, or exit from the project. From these discussions, it appears that parents as a whole like their children to be mainstreamed as soon as possible. Program students also reflect this attitude. This does not mean that the students do not like the project. Most of them retain ties with it once they are mainstreamed, but this attitude reflects two sentiments: (1) mainstreaming is seen as an achievement, and (2) the project is not being used as a hiding place from the school "outside world."

Once the student has been mainstreamed, a follow-up of his/her progress is continued through the grade advisor. During the student's first term out of the project, the project office helps the student to plan his/her program. This is done in cooperation with the bilingual guidance counselor. The project office continues to be available to help the mainstreamed student as needed.

Transition from a bilingual program to mainstream classes always presents adjustment problems. These problems often appear regardless of the students' proficiency in the English language. To help students make this transition, the program encourages students to fully participate in the mainstream courses they have been attending while in the project. A breakdown of the project students' participation in these classes shows that during the 1979-80 year physical education was attended by 100% of the project students, and music or art by approximately 45% of the students.

After being mainstreamed, the project students follow a program of studies which is appropriate to their graduation requirements and which follows the curricular sequence started in the project. As we have indicated, some mainstreamed students retain some form of relationship with the project. About 15% of students previously mainstreamed continued to be involved with the project during the school year 1979-80. Some of these continued to work on La Voz Hispana, or came back for advice in terms of programming, and for referrals to outside agencies.

In addition to mainstreaming, students leave the project for other reasons. A list of these is given below. Included is the number of students who left the project since September, 1979.

1. Fully mainstreamed - 138 students
2. Discharged to an alternative program - 2 students
3. Transferred to another school because of a change of residence - 4 students
4. Returned to their native countries - 8 students
5. Removed from the project by parental request - 24 students
6. Discharged due to inability of the project to locate them - 5 students
7. Other reasons (including drop outs, employment certificates and others) - 61 students

B. The Instructional Component:

The project includes both Hispanic and Chinese bilingual students. Hispanic students receive instruction in: ESL, Spanish, bilingual content area classes, and mainstream classes. Chinese students attending the project receive only ESL instruction; the rest of their instruction is received in the Chinese/Korean Bilingual Center of the school.

The project has been in existence for five years. This is the project's final year of funding, and no other funding provisions have been made for its continuation. Charts A-1 and A-2 present this year's funding sources for the instructional component of each language group.

CHART A-1

FUNDING SOURCES FOR THE INSTRUCTIONAL COMPONENT

Language Group: Spanish

Instructional Component	Funding Source(s)	Number of Personnel: Teachers	Paras
E.S.L.	Tax Levy	6	0
Reading (English)	Not Applicable		
Native Language	Tax Levy	3	0
Math	Tax Levy	2.4	1
Social Studies	Tax Levy	1.4	1
Science	Tax Levy	1.8	1
Other (Voc. Ed., etc.)	Not Applicable		

CHART A-2

FUNDING-INSTRUCTIONAL COMPONENT

Language Group: Chinese

Instructional Component	Funding Source(s)	Number of Personnel: Teachers	Paras
E.S.L.	Tax Levy	6	0
Reading (English)	Not Applicable		
Native Language	Tax Levy	0	0
Math	Tax Levy	0	0
Social Studies	Tax Levy	0	0
Science	Tax Levy	0	0
Other (Voc. Ed., etc.)	Not Applicable		

C. Bilingual Classes:

Chart B presents the bilingual classes offered by the project, the number of classes offered, the class, registers, and other pertinent information. The chart reflects only bilingual classes for Hispanic students, as Chinese students take their courses outside the project. Competence in these content areas is heterogeneous; however, the teachers are equipped to diagnose and offer prescriptive instruction through the materials and methodologies used in the classroom. There are no separate classes devoted to the study of Latin American Hispanic cultures, but items of the cultural patterns represented by the student population are incorporated in the social studies curriculum.

CHART-B

BILINGUAL CLASSES

COMPONENT/ SUBJECT	NO. CLASS/ CLASS REGISTER	LANGUAGE(s) OF INSTRUCTION	USED FOR WHAT % OF CLASS TIME?	HOURS PER WEEK	STAFFING: NUMBERS OF: TEACHERS	PARAS	CURRICULUM IN USE (DESCRIBE)	MATERIALS IN USE: APPROPRIATE TO STUDENTS' NATIVE LANGUAGE? (Y OR N)
Math	12-27.5*	Spanish	100%	5/week	2.4	1	N.Y.C. Board of Ed. Curriculum	Yes
Science	9-32.6*	Spanish	100%	5/week	1.8	1	N.Y.C. Board of Ed. Curriculum	Yes
Soc. Studies	7-33.5*	Spanish	100%	5/week	2.4	1	N.Y.C. Board of Ed. Curriculum	Yes

*The class registers represent the average number of students per class.

D. Program Students in ESL and Mainstream Classes:

Chart C presents information on the project students attending courses with mainstream students and courses in ESL. Beside these, a small number of project students attend biology, math, and social studies in mainstream classes. Because of the small numbers of students involved, information on this latter group is not included in the chart.

CHART-C

MAINSTREAM CLASSES

COMPONENT/SUBJECT	TOTAL NUMBER OF STUDENTS	HOURS PER WEEK	CRITERIA FOR SELECTION
E.S.L.	380	5	Lab Criteria
Music	73	5	Student Preference
Art	89	5	Student Preference
Physical Ed.	380	5	Graduation Requirements
Business	figures not available		(# of students is insignificant)
Mathematics	" " "		" " " "
Soc. Studies	" " "		" " " "

VI. Non-Instructional Components

A. Funding Sources:

The non-instructional components of the project are funded by Title VII and Tax Levy. Chart D details the funding source of each area in this component.

CHART D

FUNDING SOURCES, NON-INSTRUCTIONAL COMPONENTS

	Funding source(s)	Personnel Providing Services (No. & Title)
A. Curriculum Development	Title VII	3 Resource Teachers (one for each subject area)
B. Supportive Services	Tax Levy	1 Bilingual Guidance Counselor
C. Staff Development	Title VII	Project Director (1) and local universities
D. Parental and Community Involvement	Title VII	Project Director
E. Other	Title VII	a- La Voz Hispana - C. Bonilla, Advisor b- Parents Newsletters- Project Director c- Salsa y Sabor - recipe booklet - developed by parents, students and faculty d- Bienvenidos a Newtown - (student guide) - developed by staff e- trips (6) f- Police Sensitivity Workshops - 12 sessions - developed by Title VII teachers

B. Curriculum and Materials Development:

The project continued to develop materials for the bilingual classes in science, social studies, and mathematics. The project office displayed four files of teacher-made materials in these areas. Files contained curricular materials, practice exercises, tests, and the syllabi for science, biology, and social studies courses. It was not clear which of the materials contained in the files were made during the current year. Samples of Biology material are included in Addendum 2.

The Bilingual/Bicultural Project has drawn on a number of sources in developing materials and curricula. The project has translated into Spanish the New York City Board of Education Curricula in the above-mentioned areas. Contacts have been developed with the Basic Bilingual Program at John Bowne High School, and ideas are exchanged between the two projects. The project has also made use of the Bilingual Resource Center of the New York City Board of Education.

C. Materials in Use:

The following textbooks are used in the project:

1. Biology

   a) Laboratorio de Biología: Investigaciones
      by Edna Green
      Publicaciones Culturales, SA

   b) Biología
      by William L. Smallwood and Edna Green
      Publicaciones Culturales, SA

2. English as a Second Language

   a) Modern American English, Books 1, 2, 4
      with Workbooks
      by Robert Dixon
      Regents Pub. House

b) Elementary Reader in English
by Robert Dixon
Regents Pub. House

c) Patterns of American English
by Marian Brown Lorenz
Oceania Pub., 1976

d) Real Stories, Book 1
Milton Katz et al
Globe Book Co.

3. Mathematics

a- Aritmética
by A. Baldor
Centro Cultural, Centro Americano

b- Repaso Matemático
by Edwin I. Stein
Allyn and Bacon Inc., 1971

4. Science

a- Ciencias: Estudio de la Naturaleza, 6º
by Luis Rey
Cultural Centro Americana, 1974

b- Ciencias de la Naturaleza, 8º
by Agustín Peiro Hurtado
Ediciones Anaya, SA, 1974

c- Ciencias: Areas de Experiencia, 5º
by Jose Roig Pons y Tomás Larrosa Barbero
Editorial Santiago Rodríguez, SA, 1975

d- Introducción a las Ciencias
Colección Alinorma
M. Fernández y Cia, SA, 1874

5. Social Studies

a) World Studies

1. India y Pakistán
by Erwin Rosenfeld and Harriet Geller
Serie Educacional de Barron, Inc, 1976

2. Historia de América
by Agustín Montenegro Gonzalez
Editorial Norma, 1976

3. El Medio Oriente y Africa del Norte
by Erwin Rosenfeld and Harriet Geller
Serie Educacional de Barron, Inc, 1976

4. Africa, Sud del Sahara
by Erwin Rosenfeld and Harriet Geller
Serie Educacional de Barron, 1974

b) World History

1) Historia de la Humanidad
by Daniel Roselle
Editorial Norma, 1967

D. Supportive Services:

1. Home Contacts: The project has no personnel to make home visits. Nevertheless, the project director made a few home visits during the school year because of situations which urgently required intervention. The paraprofessionals and project director also contact the homes though the telephone and the mail.

2. Counseling: Career education and vocational guidance are limited because the project only serves 9th and 10th grades. These types of counseling are reserved for junior and senior years of high school. The project has done extensive individual counseling on an on-going, as-needed basis through personal relationships between the students and the project personnel.

3. Tutoring: Tutoring, in the areas of math and ESL, has proven beneficial for upgrading the skills of students. Referrals are made through the classroom teachers or the director's recommendation. Tutoring is done on a one-to-one basis. The project was able to increase tutorial services, especially in the area of ESL, during this current year.

Chart E describes the supportive services rendered by the project to its students during the year 1979-80.

CHART E

SUPPORTIVE SERVICES

SERVICE	Students Served: Number	How Selected?	Number of Personnel Providing Services: Teachers	Paras	Others	Discussion/Problems or Evaluation
Home Visits	0					director has made a few emergency home visits, number not available.
Career Education/ Vocational Career Counseling	0					
Individual/Group Guidance	200	teacher referral or recommendation	2	3	0	
Telephone Contacts:	55	teacher referral or recommendation	0	1.5	1	
Other	84	teacher referral	2	3	0	

E. Staff Characteristics:

Chart F delineates the characteristics of the project's staff.

CHART F

STAFF CHARACTERISTICS

Number of Personnel	Position	EDUCATION: Degrees?	Certification?	EXPERIENCE Monolingual	Bilingual
Professionals					
16	teachers	MA+ Degrees		6	10
Non-Professionals					
3	2 Educational Assistants	2 BA+ Degrees		0	3
	1 Family Assistant	1 High School Graduate			

F. Staff Development:

The budget for this current year was cut by $3,800.00. This meant nearly a 10% drop from previous years. The area where this cut was felt most was the area of staff development. Nevertheless, certain activities in this vital area were carried out. Daily meetings were implemented between teachers and paraprofessionals to plan the day's work. Monthly meetings devoted to staff development were held. One paraprofessional attended a conference in Washington, D. C. on the subject area of class management. The expertise acquired in the conference was shared with the rest of the staff. Six members of the staff took courses at New York University. Chart G details the staff meetings and Addendum 3 the college courses attended by the staff.

CHART G

STAFF DEVELOPMENT

STRATEGY		GOAL	Number of Participants Teachers and Paras	Frequency of Occurrence	DESCRIPTION
UNIVERSITY COURSES:	Teachers	Increase Expertise	6		Attended Courses at New York University
	Paras				
MEETINGS:	Teachers	Students problems Students progress	7	monthly	Staff Development
	Paras	Classroom Management Curriculum Assessment	3	monthly	Staff Development
SYMPOSIA/ CONFERENCES:		Improve class management	1	1	Management Conference in Washington, D. C.
OTHER IN SERVICE:	Teachers	Improve class management	7	daily	Daily teachers' and paraprofessionals' meetings to discuss the plans for the days' work.
	Paras	Improve Class efficiency	2	daily	

G. Parental and Community Involvement:

The project has several mechanisms to involve the parents and the community in its activities. Foremost in its scope is the Parent Advisory Committee. It is composed of five parents and two students who volunteered to serve. The committee meets three or four times during the year. This current year it met four times. The committee's functions include making recommendations to the project, helping in the implementation of these recommendations, and chaperoning students at extra-curricular activities. Two other mechanisms for community and parental involvement are the school trips and the orientation meetings of the school. The project had six trips during the 1979-1980 year. They were to the Bronx Zoo, The Museum of Natural History, to Fort Totten with the Police Youth Dialogue, to Police Headquarters in Manhattan, to Queensborough Community College on Bilingual Career Day, and to Washington, D. C. The school orientation meetings are well attended by the parents. There are other ways in which the project involves the parents and the community. A Police Sensitivity Workshop of 12 sessions was attended by the project's teachers. The community and the students' parents are informed of the school and the project activities through La Voz Hispana and Enterese de la Ultima, both project publications. The project translates all school notices into Spanish. Due to budgetary constraints, the parents' education courses were not offered this current year.

Parent involvement is affected by economic conditions. The project student population is an immigrant/migrant one. These families have been uprooted from familiar surroundings to strange and unfamiliar neighborhoods.

First generation immigrants and migrants, with very few exceptions, get the lowest paying jobs. The results are that the acquisition of the basic items of survival, food, clothing and shelter, absorb most of their energies. In most cases, both parents have to work and usually one of the parents, or one of the adult members of the family, has to hold two jobs. This leaves very little time for involvement in any other activity. Under these conditions, school or community activities do not have the importance they might have had in their countries. An indicator of the students' economic conditions is the fact that, during this current year, the school gave the parents 400 letters for the Department of Social Services (Welfare). There are 350 recipients of free breakfast and 1100 of free lunch. Nevertheless, activities such as project trips and orientation meetings have been attended by a large number of the parents.

H. Affective Domain:

Many indicators point out the effectiveness of the project. Vandalism is non-existent, and there have been no suspensions during the year. When students leave the project, it is for specific reasons. Students are in constant personal contact with the project staff while they are in the project and, in many cases, even after they leave. Students' sense of pride can be ascertained when they speak about their achievements in school, their relationship with the staff, and, especially, the project newspaper, La Voz Hispana.

VII. Assessment Procedures and Findings

The following section presents the assessment instruments and procedures, and the results of the testing.

A. Assessment Procedures and Instruments

Students were assessed in English language development, growth in their mastery of their native language, mathematics, social studies and science. The following are the areas assessed and the instruments used:

English as a Second Language	--	Criterion Referenced English Syntax Test (CREST), Levels I, II, III
English Language Fluency	--	Oral Language Ability Scale Expressive and Receptive Modes
Reading in Spanish	--	CIA Prueba de Lectura (Total Score), Level 4
Mathematics Performance	--	Teacher-made Tests
Science Performance	--	Teacher-made Tests
Social Studies Performance	--	Teacher-made Tests
Attendance	--	School and Program Records

The following analyses were performed:

a) On pre/post standardized tests of Spanish Reading Achievement, statistical and educational significance are reported:

1) Statistical Significance was determined through the application of the correlated t-test model. This statistical analysis demonstrates whether the difference between pre-test and post-test mean scores is larger than would be expected by chance variation alone; i.e. is statistically significant.

This analysis does not represent an estimate of how students would have performed in the absence of the program. No such estimate could be made because of the inapplicability of test norms for this population, and the unavailability of an appropriate comparison group.

2) Educational Significance was determined for each grade level by calculating an "effect size" based on observed summary statistics using the procedure recommended by Cohen.[1]

An effect size for the correlated t-test model is an estimate of the difference between pre-test and post-test means expressed in standard deviation units freed of the influence of sample size. It became desirable to establish such an estimate because substantial differences that do exist frequently fail to reach statistical significance if the number of observations for each unit of statistical analysis is small. Similarly, statistically significant differences often are not educationally meaningful.

Thus, statistical and educational significance permit a more meaningful appraisal of project outcomes. As a rule of thumb, the following effect size indices are recommended by Cohen as guides to interpreting educational significance (ES):

[1] Jacob Cohen. Statistical Power Analysis for the Behavioral Sciences (Revised Edition). New York: Academic Press, 1977 Chapter 2.

a difference of 1/5 = .20 = small ES

a difference of 1/2 = .50 = medium ES

a difference of 4/5 = .80 = large ES

b) On the Criterion Referenced English Syntax Test (CREST) information is provided on the number of objectives attempted and mastered, the percentage of objectives mastered versus those attempted, and the number of objectives mastered per month of treatment. Information is also provided on student performance on the various test levels.

c) For the New York City Oral Language Ability Rating Scale, the total number and percent of students improving at least one scale level is compared to the criterion set by the program, which stipulated that 70% of the students will demonstrate growth of one level or more.

d) The results of the criterion referenced tests in mathematics, social studies, and science are reported in terms of the number and percent of students achieving the criterion levels set for the participants (65% passing).

e) Information is provided on the attendance rate of students participating in the bilingual program compared with that of the total school population.

The following pages present student achievement in tabular form.

TABLE I

English as a Second Language

Spanish Speaking Students

(Total Year, Non Title I)

Results of the Criterion Referenced English Syntax Test (CREST) Reporting the Number of Objectives Mastered, Percent Mastered, and Objectives Mastered Per Month.

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Months of Treatment	Objectives Mastered Per Month
9	157	16.2	8.9	55%	9.8	.9
10	160	16.6	12.1	73%	9.9	1.2
Totals	317	16.4	10.5	64%	9.9	1.1

TABLE I presents total year results of CREST testing for Spanish speaking students regardless of test level. The number of objectives attempted on the average was 16.2 in grade 9 and 16.6 in grade 10. The average number of objectives mastered was 8.9 in grade 9 and 12.1 in grade 10. These data translate into mastery rates of 55% in grade 9 and 73% in grade 10. Average mastery rates expressed as a ratio of objectives mastered for every four weeks of instruction was .9 in grade 9 and 1.2 objectives mastered per month in grade 10. The data indicate greater than expected rate of English language growth.

TABLE II

English as a Second Language

Spanish Speaking Students

(Total Year: Non Title I)

Student Performance on the
Criterion Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

		LEVEL I			LEVEL II			LEVEL III		
Grade	# of Students	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
9	157	1653	784	47%	888	621	70%	--	--	--
10	160	777	511	66%	1788	1345	75%	96	74	97%
Totals	317	2430	1295	53%	2676	1966	73%	96	74	97%

The total year grade and test level crosstabulation for Spanish speaking students revealed that 9th graders functioned modally on Level I and 10th graders functioned modally on the intermediate level (II). The data indicate that students generally mastered objectives at a greater than 50% level. A higher mastery rate occurred for upper test levels.

TABLE III

English as a Second Language

Chinese Speaking Students

(Total Year: Non Title I)

Results of the Criterion Referenced English Syntax Test (CREST)
Reporting the Number of Objectives Mastered, Percent Mastered,
and Objectives Mastered Per Month.

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Months of Treatment	Objectives Mastered Per Month
9	14	19.1	10.5	55%	10.0	1.1
10	10	22.6	17.9	79%	10.0	1.8
11	1	20.0	15.0	75%	10.0	1.5
Totals	25	20.6	13.6	84%	10.0	1.4

Table III presents total year results of CREST testing for Chinese speaking students regardless of test level. The number of objectives attempted on the average ranged from 19.1 in grade 9 to 20.0 in grade 11. The average number of objectives mastered ranged from 10.5 in grade 9 to 17.9 in grade 10. These data translate into mastery rates which ranged from 55% in grade 9 to 79% in grade 10. Average mastery rates expressed as a ratio of objectives mastered for every four weeks of instruction ranged from 1.1 in grade 9 to 1.8 objectives mastered per month in grade 10. The data show much better than predicted rates of English language mastery.

TABLE IV

English as a Second Language

Chinese Speaking Students

(Total Year: Non Title I)

Student Performance on the
Criterion Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

		LEVEL I			LEVEL II			LEVEL III		
Grade	# of Students	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
9	14	202	108	53%	66	39	59%	--	--	--
10	10	74	55	74%	152	124	82%	--	--	--
11	1	--	--	--	20	15	75%	--	--	--
Totals	25	276	163	59%	238	178	75%	--	--	--

The total year grade and test level crosstabulation for Chinese speaking students revealed that lower grade level students functioned primarily at lower test levels, and higher grade levels performed basically at upper test levels. In all cases a greater than 50% mastery rate was observed.

TABLE V

Oral Language Ability

Number and Percentages of Students Advancing One Level or More on the Expressive and Receptive Modes on the Oral Language Ability Rating Scale, by Grade

Spanish Speaking Students

Grade	N	Expressive Domain		Receptive Domain	
		Students Advancing One Level	%	Students Advancing One Level	%
9	165	127	77%	142	84%*
10	164	140	85%	135	81%**

*N = 170
**N = 166

In the expressive mode, the percentage of Spanish speaking students gaining one scale rating was 77% at the 9th grade and 85% at the 10th grade. In the receptive mode, the percentage of students gaining one scale rating was 81% at the 10th grade and 84% at the 9th grade.

In view of the stated evaluation objective that at least 70% of the students will gain at least one scale rating, the above table indicates that this objective was achieved in all grades in the expressive and receptive modes.

Interpretation of these data should be conditioned, however, by the fact that the initial rating of the students is not reflected in these data. Examination of the Rating Scale itself (Addendum) reveals that the rates of expected progress from one level to another are not symmetrical. It may be expected that students who speak little or no English (levels E or F) will progress one scale level within a year of instruction, but that students functioning at a relatively high level (level B, for example) may not reach a higher level in one year. These levels represent degrees of fluency approaching or equalling that of a native speaker of

TABLE V (Cont'd)

English. It is unreasonable and unrealistic to expect rates of student progress at these levels similar to those of beginning students of E.S.L. Level A, for example, is unlikely to achieved by students who have not had extensive exposure to oral and written English. Those who learn English as adults may never achieve it. Level B is also likely to require years of exposure to English.

It is suggested, therefore, that student outcomes be analyzed in terms of the initial fluency rating of each student, and that the criteria for mastery reflect reasonable expectations for student growth at each level.

TABLE VI

Oral Language Ability

Number and Percentages of Students Advancing One Level or More on the Expressive and Receptive Modes on the Oral Language Ability Rating Scale, by Grade

Chinese Speaking Students

Grade	N	Expressive Domain		Receptive Domain	
		Students Advancing One Level	%	Students Advancing One Level	%
9	15	14	93%	15	100%
10	12	11	92%	12	100%

In the expressive mode, the percentage of Chinese speaking students gaining one scale rating was 92% at the 10th grade and 93% at the 9th grade. In the receptive mode, the percentage of students gaining one scale rating was 100% at each grade.

In view of the stated evaluation objective that at least 70% of the students will gain at least one scale rating, the above table indicates that this objective was achieved in each grade at very high levels in the expressive and receptive modes.

TABLE VII

Native Language Reading Achievement
Spanish Speaking Students

Significance of Mean Total Raw Score Differences Between Initial and Final Test Scores in Native Language Reading Achievement of Students with Full Instructional Treatment on the C.I.A. Prueba de Lectura, (Total Score), Level 4

		Pre-Test		Post-Test						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pre-Post	t	p	ES
9	148	48.6	19.4	55.5	19.3	5.9	.92	9.02	.001	.74
10	152	60.3	19.7	64.8	20.7	4.5	.87	5.24	.001	.43

Table VII presents achievement data for Spanish speaking students on the C.I.A. Prueba de Lectura, Level 4. Students in grade 9 showed raw score gains of 5.9 raw score points while 10th grade students showed a gain of 4.5 raw score points. The gains for 9th and 10th grade students were statistically significant beyond the .001 level of significance. The gains for students in grade 9, when expressed in standard deviation units were judged to be of large educational significance, and the achievement gains for 10th grade students were of small to moderate educational significance.

Thus, students in grades 9 and 10 showed statistically and educationally significant gains in reading achievement in their native language.

TABLE VIII

Mathematics Performance
Spanish Speaking Students

Number and Percent of Students Passing Teacher-Made Examinations in Mathematics

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	144	129	90%	143	121	85%
10	128	117	91%	131	101	77%

In the Fall term, the percentage of Spanish speaking students passing teacher-made examinations in Mathematics was 90% in grade 9 and 91% in grade 10. In Spring, the percent mastering the curriculum was 77% in grade 10 and 85% in grade 9. Overall, the stated evaluation objective for Mathematics was met and substantially surpassed in grades 9 and 10 (65% pass rate).

TABLE IX

Science Performance
Spanish Speaking Students

Number and Percent of Students Passing Teacher-Made Examinations in Science

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	86	76	88%	94	80	85%
10	124	117	94%	123	106	86%

In the Fall term, the percentage of Spanish speaking students passing teacher-made examinations in Science was 88% in grade 9 and 94% in grade 10. In Spring, the percent mastering the curriculum was 85% in grade 9 and 86% in grade 10. Overall, the stated evaluation objective for Science was met and substantially surpassed in grades 9 and 10 (65% pass rate).

TABLE X

Social Studies Performance
Spanish Speaking Students

Number and Percent of Students Passing Teacher-Made Examinations in Social Studies

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	104	95	91%	78	69	89%
10	96	93	97%	109	98	90%

In the Fall term, the percentage of Spanish speaking students passing teacher-made examinations in Social Studies was 91% in grade 9 and 97% in grade 10. In Spring, the percent mastering the curriculum was 89% in grade 9 and 90% in grade 10. Overall, the stated evaluation objective for Social Studies was met and substantially surpassed in grades 9 and 10 (65% of pass rate).

TABLE XI

ATTENDANCE RATES

Spanish Speaking Students

Number and Percent of Students Surpassing the General School Attendance Rate, Reporting the Program Attendance Rate and Standard Deviation

Grade	No. of Students	Average Attendance	Standard Deviation	Number Surpassing Rate	% Exceeding School Rate
9	165	94.0%	7.0	165	100%
10	168	93.8%	6.9	168	100%

Average attendance rates for Spanish speaking students were observed to be approximately 94% in grades 9 and 10. Each participating program student had an attendance rate which exceeded the school-wide attendance rate. These data show extremely high attendance rates.

TABLE XII

ATTENDANCE RATES

Chinese Speaking Students

Number and Percent of Students Surpassing the General School Attendance Rate, Reporting the Program Attendance Rate and Standard Deviation

Grade	No. of Students	Average Attendance	Standard Deviation	Number Surpassing Rate	% Exceeding School Rate
9	15	93.9%	10.1	15	100%
10	12	96.1%	6.8	12	100%
11	1	88.0%	- -	1	100%

The average attendance rates for Chinese speaking students ranged from 88%in grade 11 (one student) to 96% (grade 9). In all grades, the attendance of each child exceeded that of the average school-wide rate. Students attended school at extremely high rates.

B. Summary of Findings

The following paragraphs summarize the results of the pre-post testing and other measures of student growth. Additional commentary and/or discussion is included wherever the outcomes require clarification.

1. English as a Second Language. Spanish speaking students taking the CREST mastered an average of 1.1 curricular objectives per month of instruction, exceeding the criterion level of 1.0. Ninth graders were working primarily on level I objectives, while 10th graders primarily functioned on levels I and II.

Chinese-speaking students showed good rates of mastery on the CREST, averaging 1.4 objectives mastered per month of treatment. As with the Hispanic students, there was a relationship between grade and instructional level. Ninth graders tended to work on the lower levels of instruction, while 10th graders were working principally on level II.

2. English Language Fluency. Both Spanish and Chinese speaking students achieved high rates of mastery on the Oral Language Ability Rating Scale. The criterion set by the program was that 70% of the students would advance one scale level in the expressive and receptive modes. Student mastery rates ranged from 77% to 100%, exceeding the criterion level in all instances.

3. Reading Achievement in Spanish. Students in both 9th and 10th grades demonstrated gains which were statistically and educationally sugnificant, thus achieving the program's goal in this area.

4. Achievement in Mathematics. The percentage of Hispanic students passing teacher-made examinations in mathematics ranged from 77 to 91.

As the program's criterion was that 65% of the students enrolled in mathematics classes would pass examinations in those classes, the objective in this area was met and substantially surpassed.

5. Achievement in Science. Hispanic students taking teacher-made examinations in science achieved rates of passing which ranged from 85% to 94%. These rates were far above the 65% criterion level.

6. Achievement in Social Studies. In this area, Spanish speaking students achieved rates of success on teacher-made examinations ranging from 89% to 97%. These very high rates were substantially above the program's criterion.

7. Attendance. Hispanic students as a whole had attendance rates of approximately 94%, an average which far surpassed the schoolwide rate. In addition, every individual Spanish speaking student's attendance rate surpassed the average for the total school. The Chinese speaking students were equally successful in this area. Average attendance ranged from 88% to 96%, and all Chinese students had rates of attendance which exceeded the schoolwide rate.

VIII. Conclusions and Recommendations

The project appears to be very successful. The students interviewed appeared to be motivated, proud to belong to the project, desirous of being mainstreamed for achievement purposes, and of keeping ties with the project after they leave. Discipline problems are non-existent. Achievement is high as evidenced by the way English was spoken by the students interviewed. Parental involvement is relatively positive despite the sociological circumstances of the students' families. Project staff relationships appeared warm and easy going, yet professional. Staff relationships with the rest of the school appeared to be friendly, as evidenced by observations in the school halls and the cafeteria. Nevertheless, the project is in its last year of funding and no funding sources have been explored for its continuation.

In an interview with the school principal, he very strongly indicated that the school has always been and will continue to be committed to bilingual education. He indicated that prior to the Consent Decree the school had foreseen the need for bilingual education, and had established a bilingual program within the school. He further stated that, for the future, he planned to continue a bilingual component for Hispanics in the school "of the maximum possible scope with the limited resources" the school had. He indicated that the limited resources of the school excluded a director's position for this component and included a limitation of paraprofessionals. The principal further indicated that there were no specific plans as yet for this component. Further interviews revealed that the school had had courses in ESL prior to the inception of the project. None of the persons interviewed in this respect recalled

content courses being taught in Spanish prior to the beginning of the project.

It is recommended that funding avenues be explored during the year 1980-81 for the future continuation of the project. Although bilingualism is equated with ESLin the minds of many educators, the teaching of ESL does not, by itself, meet the needs of the Hispanic population of a school. If these are to be met, it is recommended that a fully bilingual program be maintained which includes ESL and content area courses both in English and in Spanish. It appears that such a program is needed by the Hispanic population of the Newtown High School for the following reasons:

1) the large percentage of Hispanic LEPs in the school,

2) the students' motivation appear to be lowered when Hispanic LEPs are mainstreamed without proper linguistic preparation, and

3) this lack of motivation could be expressed in an increase in the drop-out rate and/or negative behavior in the school.

To fully meet the needs of the Hispanic student population of the school the bilingual program should include:

1) student participation in ESL, Spanish Language Arts classes, bilingual content classes, and mainstream content classes,

2) administrative and supervisory personnel,

3) paraprofessionals and classroom assistants,

4) and mechanisms for parental involvement and curricular development.

IX. ADDENDA

ADDENDUM 1

LEP STUDENTS ENROLLED IN E.S.L. CLASSES

	ESL1	ESL2	TR3	TR4
Hispanic	75	112	97	85
Haitian	2	2	2	4
Chinese	18	32	26	21
Vietnamese	0	5	11	5
Korean	9	14	3	17
Russian	2	2	2	4
Indian	0	1	0	0
Philipino	2	0	0	2
Pakistan	0	2	0	3
Japanese	0	0	1	0
Turkish	0	1	1	0
Persian	1	1	1	0
Laotian	3	0	0	0
Armenian	0	1	0	0
Hindu	0	1	0	0
Portuguese	0	1	0	0
Arabic	0	0	0	1
Afghanistan	0	0	0	1
Total	112	175	144	133

ADDENDUM 2

SAMPLE OF BIOLOGY CURRICULUM

NEWTOWN HIGH SCHOOL
JOSEPH WEINTRAUB, PRINCIPAL

BILINGUAL BIOLOGY 2 (SPANISH) — 12 de mayo de 1978
NOMBRE _____ MAESTRA _____

PARTE I. ESCOJA LA CONTESTACIÓN CORRECTA. ESCRIBA LA LETRA EN EL ESPACIO AL FRENTE DEL NÚMERO.

____1. El aire atmosférico contiene .04% de CO_2, el aire que eliminamos al respirar contiene 4.5% CO_2. ¿Qué proceso es responsable de esta diferencia?
a. fotosíntesis b. secreción c. hidrólisis d. reproducción

____2. El movimiento de nutrientes de las hojas hasta la raíz, ocurre por medio de:
a. cambio b. epidermis c. floema d. xilema

____3. En una Euglena colocada en un lugar oscuro por un largo período de tiempo, ocurre la destrucción de los cloroplastos. Como resultado esa Euglena no podrá:
a. reproducirse asexualmente c. usar moléculas orgánicas
b. usar oxígeno d. actuar como un organismo autotrópico

____4. El cambio de energía solar a energía solar a energía química depende directamente de:
a. adaptaciones de la raíz c. acción negativa de las auxinas
b. fijación del carbono en la planta d. excitación de la clorofila

____5. ¿Qué desperdicios de la repiración son usados por los autotropos?
a. CO_2 y H_2O c. glucosa y agua
b. CO_2 y O_2 d. glucosa y oxígeno

____6. Los organismos que usan compuestos orgánicos preformados son los:
a. heterotrópicos c. quimiosintéticos
b. autotrópicos d. fotosintéticos

____7. Durante el día una planta verde lleva acabo:
a. fotosíntesi solamente c. transpiración solamente
b. respiración y fotosíntesis d. transpiración y respiración solamente

____8. Las sustancias que regulan el crecimiento en las plantas son las:
a. neuronas b. axonas c. auxinas d. ceras

____9. Una planta tiene 18 cromosomas, a pesar de que la especie tiene 12 cromosomas normalmente. Esta mutación es un ejemplo de:
a. recombinación c. entrecruzamiento
b. poliploidismo d. dominancia incompleta

____10. Si se remueven todas las mitocóndrias de una célula el resultado será:
a. no ocurre la difusión c. aumenta la fotosíntesis
b. la célula necesitaría mas O_2 d. se reducen las actividades metabólicas

____11. La función principal de las células guardianes es:
a. proteger la hoja contra los insectos
b. dar rigidez a la hoja
c. facilitar el intercambio de gases en la hoja
d. almacenar grandes cantidades de auxinas

____12. En las plantas verdes, el factor común de la respiración y la fotosíntesis es que ambas necesitan:
a. luz b. hormonas c. enzimas d. cloroplastos

____13. La fuerza de transpiración esta asociada con el transporte de agua en el:
a. floema b. cambio c. xilema d. cotiledón

____14. Una característica de todas las plantas vasculares es que:
a. tienen tejido conductivo
b. producen flores
c. las semillas se desarrollan dentro de la fruta
d. las semillas se desarrollan en conos

____15. La parte directamente responsable de la transpiración en las plantas es:
a. el cloroplasto b. la estoma c. el floema d. el cambio

____16. En una planta de habichuelas, el tejido vascular se encuentra en:
a. tallo y raíz solamente c. tallo, raíz y hojas
B. raíz y hojas solamente d. tallo y hojas solamente

____17. Los pelos de la raíz se especializan en la:
a. absorción b. fotosíntesis c. reproducción d. excreción

____18. Las auxinas estan relacionadas con:
a. evaporación b. presión de la raíz c. reproducción d. regulación

____19. La respiración aeróbica es de mayor beneficio a un organismo complejo que la respiración anaeróbica porque:
a. no requiere oxígeno molecular
b. libera mayor cantidad de energía de una misma cantidad de nutriente
c. produce oxígeno como desperdicio
d. no necesita luz

____64. Segregación de los factores hereditarios ocurre durante la:
a. fertilización b. sucesión c. recombinación d. disyunción

____65. Dos organismos híbridos para una característica se cruzan y producen un gran número de hijos. Lo mas probable es que en los hijos:
a. 50% exhiban la característica recesiva
b. 100% exhiban la característica recesiva
c. 25% exhiban la característica dominante
d. 75% exhiban la característica dominante

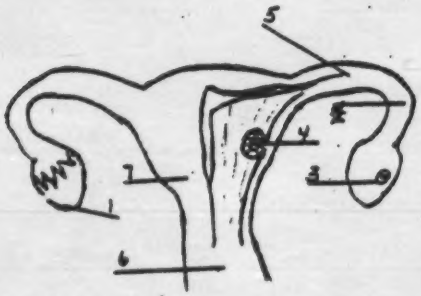
____66. Como resultado de los experimentos de Mendel con guisantes, el pudo formular los siguientes conceptos:
a. meyosis y dominancia incompleta
b. ligado al sexo y distribución independiente
c. distribución independiente y segregación
d. alelos multiples y dominancia

____68. En los humanos una característica ligada al sexo es:
a. pelo rizo c. anemia perniciosa
b. daltonismo d. mongolismo

____69. Un individuo con genes diferentes para la misma característica es un:
a. monoploide b. heterocigótico c. homocigótico d. poliploide

____70. Si un gran número de hijos resulta del cruce de "four o'clock de color rosado, ¿Qué % de los hijos serán blancos?
a. 0% b. 25% c. 50% d. 75%

PARTE II. USE LOS DIAGRAMAS PARA CONTESTAR LAS PREGUNTAS DEL 71-100.



____71. ¿Qué número indica el sitio donde ocurre la unión de los gametos?
a. 1 b. 4 c. 2 d. 6

____72. Sitio donde se forma la placenta:
a. 3 b. 4 c. 2 d. 1

____73. Donde se produce el óvulo?
a. 5 b. 6 c. 3 d. 4

____74. ¿Qué número es la vagina?
a. 1 b. 2 c. 3 d. 6

____75. ¿Qué número es la placenta?
a. 1 b. 5 c. 2 d. 4

____76. ¿Dónde ocurre meyosis?
a. 6 b. 7 c. 5 d. 3

____77. Representa el útero:
a. 1 b. 2 c. 3 d. 7

____78. Este diagrama representa los órganos:
a. femeninos b. masculinos
c. digestivos d. excretores

____79. Representa el ovario:
a. 4 b. 6 c. 7 d. 1

____80. Representa el óvulo:
a. 3 b. 6 c. 7 d. 4

USE EL SIGUIENTE DIAGRAMA PARA CONTESTAR DE LA 81-90:

____81. Dos sitios donde ocurre meyosis:
a. 1y8 b. 2y4 c. 1y4 d. 1y5

____82. Se combierte en semilla después de la fertilización:
a. 1 b. 5 c. 8 d. 4

____83. Se desarrolla en una fruta:
a. 1 b. 2 c. 3 d. 7

____84. Representan las partes fundamentales:
a. 5y9 b. 1y3 c. 6y2 d. 7y4

____85. Representa el óvulo:
a. 1 b. 3 c. 4 d. 2

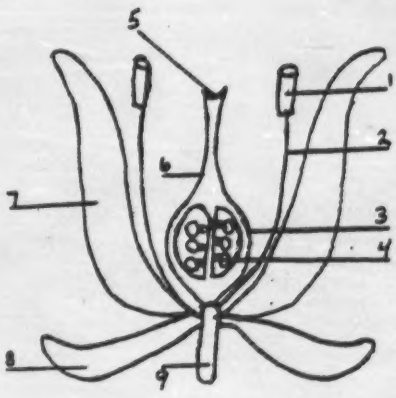
____86. Son las partes del pistilo:
a. 1,7,8 b. 6,7,8, c. 7,8,9, d. 5,6,3

____87. Produce el polen:
a. 1 b. 3 c. 6 d. 7

____88. Donde ocurre la fertilización:
a. 1 b. 2 c. 4 d. 6

____89. Proteje el botón germinal:
a. 5 b 9 c. 1 d. 8

____90. Su color atrae los insectos:
a. 1 b. 2 c. 3 d. 7



ADDENDUM 3

COLLEGE COURSES ATTENDED BY PROGRAM STAFF

NOV 19 1979

NEW YORK UNIVERSITY
Office of the Bursar
203 MAIN BUILDING
WASHINGTON SQUARE, NEW YORK, N.Y. 10003
AREA 212 598-3554

INVOICE NO. [illegible]

DATE November 14, 1979

TO: NYC Board of Education
Newtown High School
48-01 Ninetieth Street
Elmhurst, New York 11373
Attn: Rachel L. Hanson
Project Director

REFERENCE: Name of Student See Below
Period or Semester First Term 1979-80

DESCRIPTION:	Credits Points or Hours	Cost Per Unit	AMOUNT	
SCHOOL OF EDUCATION-GRADUATE				
MORALES, Maria RPO#2703138 Tuition..3pts. E29.2891 The People and Culture of Puerto Rico I.			$ 408	00
NAZARIO, Carmen I. RPO#2703136 Tuition..3pts. E11.2505 Introduction to Applied Linguistics			$ 408	00
NAZARIO, Eleonais RPO#2703137 Tuition..3pts. E13.2189 Great Concepts in Social Studies			$ 408	00
RECHCIGL, Sonia L. RPO#2834852 Tuition..3pts. E29.2927 Bilingual Education: Theory and Practice			$ 408	00
VILLANUEVA, Salvador J. RPO#2337299 Tuition..3pts. E11.2505 INtroduction to Applied Linguistics			$ 408	00
YANEZ, Robert E. RPO#2703132 Tuition..3pts. E29.2891 The People and Culture of Puerto Rico I.			$ 408	00
		TOTAL AMOUNT DUE...	$ 2448	00

Code 485 58

ADDENDUM 4

ORAL LANGUAGE ABILITY RATING SCALE, NEW YORK CITY

Scale for Rating Pupil's Ability to Speak English

Enter for each pupil the letter A, B, C, D, E, F corresponding to his estimated ability to speak English in the classroom, defined as follows:

A -- Speaks English, for his age level, like a native - with no foreign accent or hesitancy due to interference of a foreign language.

B -- Speaks English with a foreign accent, but otherwise approximates the fluency of a native speaker of like age level. Does not hesitate because he must search for English words and language forms.

C -- Can speak English well enough for most situations met by typical native pupils of like age, but still must make a conscious effort to avoid the language forms of some foreign language. Depends, in part, upon translation of words and expressions from the foreign language into English, and therefore speaks hesitantly upon occasion.

D -- Speaks English in more than a few stereotyped situations but speaks it haltingly at all times.

E -- Speaks English only in those stereotyped situations for which he has learned a few useful words and expressions.

F -- Speaks no English.

The expected outcomes listed for each grade in this handbook can serve as a guide for evaluating achievement and relating them to the above scale. This is particularly significant for the C, B, and A designations that use as a comparison typical native pupils of like age.